

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
1401	<i>Cylindropuntia whipplei</i> „DJF167 Snowflake AZ“		greenish /3	2	no	<u>2</u>	<u>high</u>		
1402	<i>Cylindropuntia whipplei</i> „MUG125 San Juan NM 2100m“		greenish /2	2	no	<u>1</u>			
1404	<i>Cylindropuntia whipplei</i> "Waiblingen		greenish /3	2	yes	<u>2</u>			
1405	<i>Cylindropuntia whipplei</i> "Wien"		greenish /3	2	advantageous	<u>2</u>			
1406	<i>Cylindropuntia whipplei</i> "Würzburg"		greenish /3	2	no	<u>2</u>			
1407	<i>Cylindropuntia whipplei</i> „W.Ferdonia“		greenish /2	1	no	<u>2</u>			
1408	<i>Cylindropuntia whipplei</i> "Weinsberg"		greenish /3	2	no	<u>2</u>			
1000	<i>Cylindropuntia imbricata</i> „FH520 Kansas“		lilac/5	1	no	<u>1</u>			
1001	<i>Cylindropuntia imbricata</i> „DJF928.19“		lilac/5	2	advantageous	<u>2</u>			
1002	<i>Cylindropuntia imbricata</i> DJF1390 w.Portrillo NM		lilac /5	3	yes	<u>2</u>			
1007	<i>Cylindropuntia imbricata</i> "Stürzer"		purple /5	2	no	<u>2</u>			
1008	<i>Cylindropuntia imbricata</i> "Uhlig"		lilac/5	1	no	<u>1</u>			
1011	<i>Cylindropuntia imbricata</i> "Jürgen“		lilac/5	2	no	<u>1</u>			
1016	<i>Cylindropuntia imbricata</i> "Krätschmer"		lilac /5	2	no	<u>1</u>			
1017	<i>Cylindropuntia imbricata</i> "Pinky"			2	no	<u>1</u>			
1018	<i>Cylindropuntia imbricata</i> "Fremont Co“		lilac/5	2	no	<u>1</u>			
1019	<i>Cylindropuntia imbricata</i> "Walter"		lilac /5	2	no	<u>1</u>			
1020	<i>Cylindropuntia imbricata</i> "Marco" (MUG120)			3	advantageous	<u>2</u>			
1010	<i>Cylindropuntia imbricata</i> MUG120		purple /5	2	no	<u>1</u>			
1702	<i>Cylindropuntia kleinae</i>		lilac /5	4	yes	<u>2</u>	<u>high</u>		
1711	<i>Cylindropuntia leptocaulis</i> Valencia Co NM		/5	4	yes	<u>3</u>	<u>high</u>		
1740	<i>Cylindropuntia versicolor</i>		lilac /5	4	yes	<u>3</u>		<u>yes</u>	
1601	<i>Cylindropuntia viridiflora</i> „SB957 Santa Fe NM“		pink /5	2	no	<u>1</u>			
1800	<i>Cylindropuntia whipplei</i> „LZ267“		greenish /4	2	yes	<u>1</u>	<u>high</u>		
1840	<i>Cylindropuntia davisii</i> „Quay Co Neu-Mexiko“		cream-greenish /2	2	yes	<u>1</u>	<u>high</u>		
1850	<i>Cylindropuntia echinocarpa</i> „MUG167 1600m“		4	3	yes	<u>2</u>	<u>high</u>		
1860	<i>Thephrocactus neuquensis</i>		/4	3	yes	<u>2</u>			
1862	<i>Thephrocactus ovata</i>		yellow-orange/4	3	yes	<u>2</u>			
1870	<i>Thephrocactus platyacantha</i>		/4	3	yes	<u>2</u>			
2000	<i>Opuntia polyacantha</i> var. <i>hystricina</i> "Cactusmannia"		cream /3	3	yes	<u>2</u>	<u>high</u>		
2003	<i>Opuntia polyacantha</i> var. <i>hystricina</i> „nicholii „		yellow /3	2	no	<u>2</u>			
2004	<i>Opuntia polyacantha</i> var. <i>erinacea</i> "ursina" (Grizzly-Bär Kaktus lila Blüte)		lilac /3	2	yes	<u>1</u>	<u>high</u>		
2005	<i>Opuntia polyacantha</i> var. <i>hystricina</i> „MUG119 südlich Pima Arizona“		yellow /1-2	2	advantageous	<u>1</u>	<u>high</u>		

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side: appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
2007	Opuntia polyacantha var. hystricina „nicholii Michael Kiesling"		lilac /4	3	yes	<u>2</u>	high		
2008	Opuntia polyacantha var. erinacea "ursina"(Grizzly-Bär Kaktus gelbe Blüte)		yellow /3	2	yes	<u>2</u>	high		
2204	Opuntia X polyacantha var.hystricina "Helgoland"		yellow /2	2	no	<u>1</u>			
2206	Opuntia X polyacantha var.hystricina "Harburg"		yellow /2	2	no	<u>1</u>			
2208	Opuntia X polyacantha var.hystricina "Hannover		orange-lilac /2	1	advantageous	<u>1</u>			
2209	Opuntia X polyacantha var.hystricina "Heidelberg"		cream-yellow /3	1	no	<u>1</u>			
2210	Opuntia X polyacantha var.hystricina "Heilbronn"		lilac/2	2	advantageous	<u>2</u>			
2211	Opuntia X polyacantha var.hystricina "Hamburg"		pink /1-2	1	no	<u>1</u>			
2212	Opuntia X polyacantha var.hystricina "Hamm"		lilac /4	1	no	<u>1</u>			
2213	Opuntia X polyacantha var.hystricina "Heide"		purple /3	2	no	<u>1</u>			
2217	Opuntia X polyacantha var.hystricina "Hanau"		pink-lilac /2	1	no	<u>1</u>			
2219	Opuntia X polyacantha var.hystricina "Halblech"		purple /2	1	no	<u>1</u>			
2222	Opuntia X polyacantha var.hystricina "Franz Schenk"		yellow /3	2	no	<u>2</u>			
2221	Opuntia X polyacantha var.hystricina "Halle"		yellow /3	2	no	<u>1</u>			
2223	Opuntia X polyacantha var.hystricina "Hagen"		lilac /3	2	advantageous	<u>1</u>			
2224	Opuntia X polyacantha var.hystricina " Manu "		lilac /3	2	advantageous	<u>2</u>		<u>yes</u>	
3201	Opuntia fragilis var. denudata „Hall Co Nebraska“		yellow /3	1	no	<u>1</u>			
3202	Opuntia fragilis „SB 229 Gunnison Co COL“		yellow /4	1	no	<u>1</u>			
3203	Opuntia fragilis var. brachyartha „LZ341 n. Faith S.DAK“		yellow /4	1	no	<u>1</u>			
3204	Opuntia fragilis „SB 95 Dunn Co. WISON“		yellow /4	1	no	<u>1</u>			
3205	Opuntia fragilis „2480mCOL Black Canyon Gunnison“		yellow /4	1	no	<u>1</u>			
3206	Opuntia fragilis "Feldberg"		yellow-red /3	1	no	<u>1</u>			
3207	Opuntia fragilis "Föhr"		lilac-red / 3	1	no	<u>1</u>			
3212	Opuntia fragilis var. oplocarpa		yellow /4	2	no	<u>2</u>		<u>yes</u>	
3214	Opuntia fragilis „LZ 364 Boulder Mts 2300 Utah“		yellow /3	1	no	<u>1</u>			
3216	Opuntia fragilis X polyacantha „SB 595 Wayne Co Utah“		yellow /4	2	yes	<u>1</u>			
3218	Opuntia fragilis „SB1413 Duel Co Nev.“		yellow /2	2	no	<u>1</u>			
3222	Opuntia fragilis var denudata „BMJ228C s-w UTAH“		pink/3	3	advantageous	<u>1</u>			
3223	Opuntia fragilis „ Fraser Valley B.C. Kanada“		yellow /4	1	no	<u>1</u>			
3240	Opuntia x columbiana „ schöner brauner Neutrieb“		yellow /3	2	no	<u>1</u>			
3000	Opuntia X fragilis „ Freiberg“		lilac /1-2	1	no	<u>1</u>			

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side:appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
3001	Opuntia X fragilis „Freising“		yellow /1	1	no	<u>1</u>			
3002	Opuntia X fragilis „Frankfurt“		yellow / 1	1	no	<u>1</u>			
3003	Opuntia X fragilis „Freiburg“		yellow 1	1	no	<u>1</u>			
3004	Opuntia X fragilis „Friedrichshafen“		yellow /3-4	1	no	<u>1</u>			
3005	Opuntia X fragilis „Füssen“		lilac/1	1	no	<u>1</u>			
2700	Opuntia basilaris var ramosa		lilac /1	2	yes	<u>2</u>		<u>yes</u>	
2701	Opuntia basilaris var. aurea		yellow /2	2	no	<u>2</u>			
2702	Opuntia basilaris „whitneyana Sierra Nevada“		lilac /2	3	yes	<u>2</u>		<u>yes</u>	
2703	Opuntia basilaris var. humistata		cream-yellow /3	3	yes	<u>2</u>		<u>yes</u>	
2706	Opuntia basilaris		lilac /2	2	yes	<u>2</u>		<u>yes</u>	
2707	Opuntia basilaris var. brachyclada		yellow-red /2	2	no	<u>1</u>			
2708	Opuntia basilaris var. aurea „St George Utah“		yellow-red /2	2	no	<u>1</u>			
2709	Opuntia basilaris „heilii Goble Valley Utah“			3	yes	<u>2</u>		<u>yes</u>	
2600	Opuntia x basilaris „Berlin“		lilac /2	2	no	<u>1</u>			
2601	Opuntia x basilaris „Bern“		salmon-orange/2	2	no	<u>1</u>			
3401	Grusonia calvata „rot“		yellow /4	3	yes	<u>2</u>			
3405	Grusonia calvata „lang Triebe“		yellow /4	3	yes	<u>2</u>			
3403	Grusonia calvata „lange Stacheln“		yellow / 4	3	yes	<u>2</u>			
3444	Grusonia calvata f. Cristata "Wicky"			3	yes	<u>2</u>			
3433	Grusonia calvata f. cristata "Gabi"			3	yes	<u>2</u>			
3600	Opuntia macrocentra f „Arizona“		yellow /3	2	no	<u>1</u>			
3602	Opuntia macrocentra var. nevadensis		yellow /3	2-3	no	<u>1</u>			
3603	Opuntia macrocentra „SB 911“ neigt zur Christatenbildung		yellow-red/3	2-3	advantageous	<u>2</u>	<u>high</u>		
3800	Opuntia polyacantha var. polyacantha „ rhodantha /Rosenheim“		lilac /3	2	no	<u>1</u>			
3802	Opuntia polyacantha var. polyacantha „ rhodantha Pisciformis“		lilac/4	2	no	<u>1</u>			
3807	Opuntia polyacantha var. polyacantha „rhodantha /spinosior Richter lila Blüte“		lilac /2	2	no	<u>1</u>			
3805	Opuntia polyacantha var. polyacantha „rhodantha/ multispina“		lilac/2	2	no	<u>1</u>			
3807	Opuntia polyacantha var. polyacantha „rhodantha /„nigra“		lilac /3	2	advantageous	<u>2</u>			
3808	Opuntia polyacantha var. polyacantha „rhodantha /dornlos Richter“		yellow / 3	2	no	<u>2</u>			
3809	Opuntia polyacantha var. polyacantha „ rhodantha Torrey UT JB runde Triebe“		yellow / 3	2	advantageous	<u>2</u>			
4903	Opuntia polyacantha var. polyacantha „ rhodantha Kurt “		lilac /3	2	no	<u>1</u>			

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side:appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
4012	Opuntia phaeacantha „longispina“		yellow-red/1	1	no	<u>2</u>		yes	
4007	Opuntia phaeacantha „Orangade“		orange /1	1	no	<u>1</u>		yes	
4018	Opuntia phaeacantha var. gigantea		yellow /2	2	no	<u>1</u>		yes	
4013	Opuntia phaeacantha „salmonea“		salmon-apricot/1	1	no	<u>2</u>			
4015	Opuntia phaeacantha var. pueblitos HK1858		yellow-orange/4	3	advantageous	<u>2</u>	high		
4014	Opuntia phaeacantha "Kirschrot"		salmon/ 3	1	no	<u>1</u>			
4020	Opuntia phaeacantha „tenuispina“		yellow /3	2	no	<u>1</u>			
4021	Opuntia phaeacantha „White Canyon Wayne Co Utah“		pink /3	2	no	<u>1</u>		yes	
4022	Opuntia engelmanni „Natural Bridge Utah“ (phaeacantha var discata)		pink/2	2	no	<u>1</u>		yes	
4023	Opuntia phaeacantha var. albispina „MUG 177 2800 m Mohave“		yellow-red /2	2	advantageous	<u>2</u>		yes	
4023	Opuntia phaeacantha „Sunrise“		yellow-red/2	2	no	<u>2</u>		yes	
4027	Opuntia phaeacantha „minor“			2	no	1			
4028	Opuntia phaeacantha „salmonea Richter“		orange-red/2	2	no	1			
4720	Opuntia engelmanni var.engelmanni		yellow /3	3	yes	<u>2</u>			
4722	Opuntia engelmanni DJF 1170.19 Sandia MtsNM		yellow /3	2	advantageous	<u>2</u>	high	yes	
4724	Opuntia engelmanni „dillenii“		yellow /3	2	no	<u>1</u>			
4701	Opuntia violacea		yellow-red /1	3	yes	<u>2</u>	high	yes	
4801	Opuntia tortispina „Albuquerque Neu-Mexiko“		lilac /1-2	2	no	<u>1</u>			
4802	Opuntia tortispina DJF1139 w.Albuquerque Neu-Mexiko		lilac /2	3	advantageous	<u>2</u>			
4811	Opuntia xanthostemma		pink /3	2	no	<u>1</u>			
4821	Opuntia polyacantha var. erinacea		yellow /4	2	no	<u>1</u>			
4822	Opuntia polyacantha var. hystricina „MUG123 Sanostee Juan Neu-Mexiko“		cream-yellow /2	2	advantageous	<u>2</u>			
4823	Opuntia polyacantha var. erinacea „LZ380 Palms 29/ursina“			4	yes	<u>3</u>			
4825	Opuntia polyacantha var. erinacea „ursina“ (Grizzly-Bär Kaktus lila Blüte) St.George Utah		lilac /3	2	yes	<u>2</u>	high		
4826	Opuntia polyacantha var. erinacea „utahensis Torrey Utah(pinkave)		yellow /3	2	no	<u>1</u>			
4827	Opuntia polyacantha var. erinacea „ utahensis JB Moab Utah“		lilac /3	2	advantageous	<u>1</u>			
4740	Opuntia rutila „Super“		lilac /3	2	no	<u>1</u>			
4741	Opuntia rutila		yellow /3	2	no	<u>1</u>			
4742	Opuntia rutila-arenaria TX BM J96K		yellow /2	3	no	<u>1</u>			
4743	Opuntia rutila „robust“		yellow /2	3	no	<u>1</u>			
4780	Opuntia sanguinica		yellow /3	3	yes	<u>3</u>		yes	

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side:appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
4781	Opuntia stricta var. Oklakomensis	ausgepflanzt sehr große Triebe	yellow /3	3	yes	<u>2</u>	<u>high</u>		
4782	Opuntia chlorotica „Kurt“		yellow /2	3	yes	<u>2</u>			
4880	Opuntia pottsii „DJF1447	Albuquerque Neu-Mexiko“	salmon-orange /2	3	yes	<u>3</u>		yes	
4881	Opuntia pottsii „Bochum“		yellow-red/2	2	advantageous	<u>2</u>	<u>high</u>		
4999	Opuntia pinkave „St. George	Utah“	yellow /3	3	no	<u>1</u>			
4901	Opuntia Hybr. „Rom“	rot-brauner Neutrieb	salmon-pink /2	2	no	<u>1</u>			
5004	Opuntia humifusa „Pt.Pelee	Ontario Kanada“	yellow /2	1	no	<u>1</u>		yes	
5006	Opuntia humifusa „rosa	Neutrieb“	yellow /2	2	no	<u>2</u>		yes	
5201	Opuntia macrohiza „Apricot“		salmon /2	2	no	<u>1</u>			
5203	Opuntia macrohiza „Susanne“		yellow-red/1	2	no	<u>1</u>			
5205	Opuntia macrohiza „Ellsworth	Co Kansas“	yellow-red/1-2	2	no	<u>1</u>			
5206	Opuntia macrohiza „DJF 720	Kenton Oklahoma“	lilac/2	2	no	<u>1</u>		yes	
5208	Opuntia macrohiza „Montgomery	Kansas“	yellow /3	2	no	<u>1</u>			
5400	Opuntia polyacantha var.polyacantha	„rufispina Gunlook Utah“	lilac /3	2	advantageous	<u>2</u>	<u>high</u>		
5401	Opuntia polyacantha „Chrystal	Tide“ süd-west Nebraska (rosa blühender Klon“	pink /3	2	no	<u>1</u>			
5403	Opuntia polyacantha var.juniperina	„LZ536“	yellow /2	2	advantageous	<u>1</u>			
5404	Opuntia polyacantha var.juniperina	„DJF 1631“	lilac /1	2	yes	<u>2</u>			
5404lachs	Opuntia polyacantha var.juniperina	„DJF1631 Oettingen lachsrosa Klon“	salmon-pink/2	2	no	<u>1</u>			
5405	Opuntia polyacantha „Powell	Wyoming“	yellow /3	2	no	<u>1</u>			
5406	Opuntia polyacantha var.hystricina	„DJF1138 Bernallio Co Neu-Mexiko“	lilac /2	2	no	<u>1</u>			
5407	Opuntia polyacantha „Redcliff	Kanada“	yellow /3	2	yes	<u>1</u>			
5408	Opuntia polyacantha“Cheyenne	Wyoming 1835m“	yellow /3	1	no	<u>1</u>			
5409	Opuntia polyacantha“Reedpoint	Montana“	yellow /3	1	no	<u>1</u>			
5410	Opuntia polyacantha „rubripina	Michael Kiesling“	dark-pink/4	2	no	<u>1</u>			
5411	Opuntia polyacantha "Linz"		purple / 2	2	no	<u>1</u>			
5412	Opuntia polyacantha var.polyacantha	„rufispina Michael Kiesling“	yellow /2	3	yes	<u>2</u>	<u>high</u>		
5413	Opuntia polyacantha „Chugwater	Platte Co wyoming“	yellow /3	2	no	<u>1</u>			
5415	Opuntia polyacantha „Belle	Fourche S-Dakota“	yellow /3	2	no	<u>1</u>			
5416	Opuntia X polyacantha“Wibke“		raspberry-red/2	2	advantageous	<u>1</u>		yes	
5417	Opuntia polyacantha var.polyacantha	„rufispina Bicknell Utah“		2	yes	<u>1</u>			
5419	Opuntia polyacantha „Chrystal	Tide/Richter “	cream-yellow /2	2	no	<u>1</u>			
5421	Opuntia polyacantha „JB Blind	Vally Millard Co Utah“	lilac /2	2	no	<u>1</u>		yes	

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side:appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
5422	<i>Opuntia polyacantha</i> „Wallace Kansas“		lilac/2	2	no	<u>1</u>			
5424	<i>Opuntia polyacantha</i> „Idaho FH“		yellow /3	2	no	<u>1</u>			
5425	<i>Opuntia polyacantha</i> „Januschkowetz“		yellow /2	2	no	<u>1</u>			
6103	<i>Echinocereus coccineus</i> var. <i>paucispinus</i>		orange-red/ 2	2	advantageous	<u>1</u>			
6107	<i>Echinocereus coccineus</i> SB 298 Sierra Co. NM		orange-red/3	2	yes	<u>2</u>	high		
6102	<i>Echinocereus coccineus</i> „SB 296 Red Rock NM“		orange-red/3	2	yes	<u>2</u>			
6410	<i>Echinocereus coccineus</i> „roemeri“		orange-red/ 2	3	yes	<u>3</u>			
6109	<i>Echinocereus coccineus</i> SB 236 Jarilla Mts. NM		/ 2	3	yes	<u>2</u>			
6112	<i>Echinocereus coccineus</i> „Santa Fe“		red/2	2	yes	<u>2</u>			
6118	<i>Echinocereus coccineus</i> SB344		orange-red/ 2	2	yes	<u>2</u>			
6119	<i>Echinocereus coccineus</i> ssp. <i>rosei</i> SB 235			3	<u>2</u>	<u>2</u>			
6120	<i>Echinocereus coccineus</i> ssp. <i>aggregatus</i> LZ086		orange/ 2	2	yes	<u>2</u>			
6121	<i>Echinocereus coccineus</i> ssp. <i>rosei</i> NM1054			3	yes	<u>2</u>			
6122	<i>Echinocereus coccineus</i> „lange Stacheln“			3	yes	<u>2</u>			
6202	<i>Echinocereus reichenbachii</i> ssp <i>baileyi</i> „albispinus“		pink/2	2	yes	<u>1</u>			
6209	<i>Echinocereus reichenbachii</i> „HK 1228“		pink-lilac/ /2	2	yes	<u>2</u>			
6205	<i>Echinocereus reichenbachii</i> ssp <i>baileyi</i> „DJF1308 Granite Oklahoma“		pink-lilac/2	2	yes	<u>2</u>			
6207	<i>Echinocereus reichenbachii</i> ssp <i>baileyi</i>		pink-lilac/2	2	yes	<u>1</u>			
6212	<i>Echinocereus reichenbachii</i> KLS		pink-lilac/2	2	yes	<u>2</u>			
6401	<i>Echinocereus reichenbachii</i> ssp <i>baileyi</i> „oklahomensis HK 1844“		pink-lilac/2	2	yes	<u>2</u>			
6420	<i>Echinocereus reichenbachii</i> ssp <i>reichenbachii</i> „purpureus“		lilac/2	2	yes	<u>2</u>			
6440r	<i>Echinocereus x reichenbachii</i> „Frank Boy“		red/2	2	yes	<u>2</u>			
64800	<i>Echinocereus fendleri</i>		lilac/ 2	2	yes	<u>2</u>			
6000	<i>Echinocereus triglochidiatus</i>		red/2	2	advantageous	<u>2</u>			
6001	<i>Echinocereus triglochidiatus</i> DJF 1145 Alamogordo Neu-Mexico		red/2	2	yes	<u>2</u>			
6019	<i>Echinocereus triglochidiatus</i> „melanacanthus“		red/2	2	yes	<u>2</u>			
6014	<i>Echinocereus mojavensis</i> (<i>triglochidiatus</i> var. <i>mojavensis</i>)		red/2	1	yes	<u>2</u>			
6007	<i>Echinocereus triglochidiatus</i> f. <i>inermis</i>		red/2	2	yes	<u>2</u>			
6038	<i>Echinocereus triglochidiatus</i> „HK1296“		red/2	2	yes	<u>2</u>			
6039	<i>Echinoc. triglochidiatus</i> „SB 479“		red/2	2	yes	<u>2</u>			

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side: appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
6040	Echinocereus triglochidiatus „einstachlig KLS“		red/3	2	yes	<u>2</u>			
6024	Echinocereus mojavensis f. inermis LZ 171 La Sal Mts Utah (triglochidiatus)		red/3	1	advantageous	<u>2</u>			
6300	Echinocereus viridiflorus verschiedene types		greenly/2	2	advantageous	<u>2</u>			
6380	Echinocereus x viridiflorus „Hubert“ gefpropft		ruby/2	2	yes	<u>2</u>			
6381	Echinocereus x viridiflorus „Ingrid“ gefpropft		bright red/2	2	yes	<u>2</u>			
6470	Echinocereus X roetteri (X lloydii)		orange/ 3	3	yes	<u>2</u>	high		
6473	Echinocereus X roetteri (X lloydii) SB 732		orange/ 3	3	yes	<u>2</u>	high		
6099	Echinocereus X triglochidiatus-coccineus types		various types	2	yes	<u>2</u>			
6299	Echinocereus X reichenbachii-fendleri types		various types	2	yes	<u>2</u>			
6650	Escobaria sneedii		pink/2	2	yes	<u>2</u>			
6660	Escobaria sneedii ssp. lei		pink/2	2	yes	<u>2</u>			
6630	Escobaria missouriensis		bronze/2	2	yes	<u>2</u>			
6500	Escobaria vivipara		lilac/2	2	yes	<u>2</u>			
6500	Escobaria vivipara f. cristata			2	yes	<u>2</u>			
7004	Gymnocalycium andreae		yellow /2	3	yes	<u>3</u>			
6800	Echinopsis chamacereus „Chamacereus silvestii“		red/ 1	4	yes	<u>3</u>			
6900	Pediocactus peeblesianus (Navajoa peeblesianus var. fickeisenii)		cream-white	2	yes	<u>2</u>			
8000	Yucca glauca		white /5	2	no	<u>1</u>			
8010	Yucca glauca „Cheyenne Area Wyoming 1800m“		white /5	2	no	<u>1</u>			
8014	Yucca glauca Wickenburg		white /5	2	no	<u>2</u>			
8015	Yucca glauca „Co Stender“		white /5	2	no	<u>1</u>			
8214	Yucca baccata		white /5	2	no	<u>1</u>			
8054	Yucca angustissima ssp. avia „LZ2038 Loa Pass Utah“		white /5	2	advantageous	<u>1</u>			
8055	Yucca angustissima ssp. kanabensis „Pink Coral Dunes 1900m KG,,		white /5	2	no	<u>1</u>			
8120	Yucca filamentosa „Bright Edge“		white /5	2	no	<u>1</u>			
8112	Yucca filamentosa „Color Guard“		white /5	2	no	<u>1</u>			
8220	Yucca brevifolia var. jaegeriana DJF 1276 Cima CAL		white /5	3	yes	<u>2</u>	high		
8140	Yucca arkansana		white /5	2	no	<u>1</u>			
8300	Yucca elata n. Alpine, TX,		white /5	3	advantageous	<u>2</u>			
8301	Yucca elata „Williams Arizona KG“		white /5	2	advantageous	<u>2</u>			
8400	Yucca neomexicana „JRT251 /18/ Cimmaron Co“		white /5	2	advantageous	<u>1</u>			
8700	Yucca gloriosa „Italien“		white /5	3	advantageous	<u>2</u>			

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard (>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side: appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection

Variety List Hardy Cactus 2010 Oettinger Cactusgarden Version: 29. Sep. 2009

Number	Genus / Species	Original Location	Flower Colour/ Ability for Flowering	Winter Resistenz	Protection against Rain	Permafrost > 25Day	Amount of warmth	burning	PDF- Data file
8701	<i>Yucca gloriosa variegata</i>		white /5	3-4	advantageous	<u>2</u>			
8600	<i>Yucca rostrata</i>		white /5	3	advantageous	<u>3</u>	<u>high</u>		
8601	<i>Yucca thompsoniana</i>		white /5	2	advantageous	<u>1</u>	<u>high</u>		
8602	<i>Yucca linearifolia</i>		white /5	3	advantageous	<u>3</u>	<u>high</u>		
8506	<i>Agave utahensis</i> var. <i>eborispina</i> „ Kingston Mt Californien“ long dark spine			3	yes	2	<u>high</u>		
8508	<i>Agave utahensis</i> var. <i>kaibabensis</i> GC1900m Arizona			2	yes	2	<u>high</u>		
8560	<i>Agave leguchilla</i>			3	yes	2	<u>high</u>		
8570	<i>Agave parryi</i> var <i>cousei</i>			3	yes	2	<u>high</u>		
8571	<i>Agave parryi</i> HK 1684			3	yes	2	<u>high</u>		
8581	<i>Agave toumeyana</i> „ s Globe, AZ“ compact hairy rosettes			3	yes	3	<u>high</u>		
5900	<i>Micropuntia gracicylindrica</i>		lilac/1	2	yes	2			

An details given above are empirical values from Oettingen and subject to change/not guaranteed. The info refers to climate with 500-800mm/m² rainfall and sunshine period of at least 1500h/year.

Winter hardiness: 1= very hardy (>-20°C), 2= pretty hardy (<-20°C), 3= hardy (<15°C), 4= only for very mild locations very hard(>-20°C)

Flowering ability: 1= very able, 2= able, 3= moderately able, 4= hardly able, 5= flowers not till 5th year on.

Long periods of frost: 1=no problem, 2=problems without rain protection, 3= severe problems even with rain protection.

Amount of warmth: high or very high= the plants need a lot of sun and not too much water otherwise their winter hardiness becomes less.

Burning- mostly reddish markings or pimples almost always on the sunny side:appear after very long periods of frost, mostly in February-March with particular varieties which had no rain protection